REMARKS

Claims 1-13 are currently active.

Claim 1 has been amended to include the limitation of "an indicator that shows the strength of the hand". Antecedent support of this limitation is found in Claim 6.

The Examiner has rejected Claim 14 as being anticipated by Kawai. In view of the amendment to Claim 1, it is not anticipated by Kawai. Kawai fails to teach or suggest any type of indicator that shows the strength of hand.

The Examiner has rejected Claims 2, 3 and 10 as being obvious over Kawai in view of Fry-Welch. Applicants respectfully traverse this rejection.

Referring to Kawai, there is disclosed a master manipulator. The master manipulator has nothing to do with assessing a person's hand strength. The master manipulator is for allowing an operator through gripping a member to drive a slave manipulator. It is a simple consequence of this action, that when a group member 30 is twisted with the parallelogram as it is by the operator's hand about the axis Z, the hand twisting motion is detected by the third motion sensor and controlling means 130. This has

nothing to do for determining the strength, just for determining the twisting motion. This is further shown by the fact that there is no type of indicator that shows strength of the hand, as found in amended Claim 1. Such an indicator would be totally superfluous and irrelevant to the actions of the grip mechanism taught by Kawai.

Kawai teaches the grip mechanism is a first L-shaped lever member 18 pivotable with the axis X at its center, a second L-shaped lever member 20 pivotable with the axis Y at its center on the first L-shape lever member 10, a roughly rectangular grid member 30 pivotable with the axes as second L-shaped member 20, and a connecting member 4 removable relative to the second L-shaped lever member 20 via a universal joint 34. See column 3, lines 50-62. There is a cylindrical link member 70 pivotably connected to the connecting member 40 via a second universal joint 74 similar to the joint 34 so as to form a parallelogram in cooperation with the first L-shaped lever member 10, the second L-shaped lever member 20, the connecting member 40, and the third L-shaped base member 60. Therefore, when this parallelogram is pivoted by the operator and across the axis x, the vertical hand bending motion axis detected by the first motion sensor and controlling means 110; when pivoted about the axis y, the horizontal hand bending motion Y is detected by the second motion sensing and controlling means 120; when the grip member 30 is twisted with the parallelogram as it is by the operator hand about the axis z, the hand twisting motion is detected by the third motion sensing controlling means 130. See column 4, lines 45-63.

In contrast, Fry-Welch teaches a system for testing hand, wrist and forearm strength. Fry-Welch specifically teaches a dynamometer system is provided with 4 cord-like elements designated as cables 21, 22, 23 and 24. Each of cables 21-24 is associated with a respective one of support members 11-14. In addition, each such cable is terminated at a first end and which is disposed within the open frame structure of the dynamometer system with a respective one of cable terminations 26, 27, 28, and 29. Each of cables 21-24 is installed within a cable sheath. The four cables of the present embodiment and there respectively associated cable sheaths are brought to a clamping block 36 which holds cable sheaths 31-34, but otherwise does not restrict the cables therein to move axially. The 4 cables 21-24 are each engaged with the coupler 37 which is coupled to a transducer 40. Such coupling is achieved be a shaft 39 which is held in place by a shaft support 38. The distal end of transducer 40 is supported by a transducer support block 41. The cables remain within their respective cable sheaths. Thus, a force is transmitted through the cables, but there is not necessarily present any displacement of the cables within the cable sheath or with respect to clamping block 36 upon the application of the forces described. Transducer 40 produces an electrical signal which corresponds to the tensile force of any of cables 21-24, applied at coupler 37. Coupler 37 is unidirectional in this operation so that it will conduct a tensile force from any of the cables along coupler shaft 39 to the transducer, but will not be responsive to any compressive forces in the cables.

As can be seen by this description, there are taught 2 totally different architectures and operations in Kawai and Fry-Welch. They are also for two totally different purposes. Fry-Welch specifically teaches to determine the strength of the hand, wrist and forearm but does so by not allowing the cables which are squeezed to move. In contrast, Kawai specifically requires movement, because it is nothing to do with strength, but is a manipulator to control a slave member. It is black letter law, that teachings from references must be taken in the context in which they are found. This context cannot be ignored. The context of both of these references are completely different. In fact, these references are incompatible because one requires movement and the other requires no movement in regard to the strength testing aspect relied upon by the Examiner.

Furthermore, there must be some teaching or suggestion within the references themselves to combine their teachings, and here there are none. In fact, as mentioned above, Kawai has nothing to do with testing of the strength of the hand. There is no reason why one skilled in the art would look to combine the teachings of Fry-Welch with the teachings of Kawai. Only from the hindsight of applicants' claims, is the Examiner attempted to combine these references. However, it is also black letter law that the claims cannot be used as a road map to find the various different elements in different references, and having found the different elements, conclude that the claim is arrived at.

Moreover, it would not be a simple matter of taking the teachings of Kawai and combine them with the teachings of Fry-Welch, if it could even be done (because they are incompatible). Because the systems are so totally different, it would require significant redesign and development to try to come up with some type of system that would even begin to approach applicants' claimed invention.

For these reasons, Claim 1 of applicants is not obvious from the applied art of record. Claims 2 and 3 are dependent to parent Claim 1 and are patentable for the reasons Claim 1 is patentable.

Claim 10 is patentable for the reason Claim 1 is patentable.

In view of the foregoing amendments and remarks, it is respectfully requested that the outstanding rejections and objections to this application be reconsidered and withdrawn, and Claims 1-13, now in this application be allowed.

Respectfully submitted,

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